

Date: September 12, 2007

To: LIBRARY DIRECTOR

From: Public Works Superintendent

## **IMPACTS FROM IMPLEMENTING THE RECOMMENDATIONS OF THE HERITAGE TREE REPORT**

Per the request of Assistant City Manager Hildabrand, this memo is to provide you with an evaluation of the Recommendations Summary of the draft 'Carlsbad Historic Village District Heritage Tree Report – 2002' (henceforth referred to as the Heritage Tree Report). The evaluation is specific to the anticipated impacts on the General Services Division if the City Council were to adopt the report, with the directive that compliance with these recommendations shall be mandatory for all City-owned Heritage Trees within the Historic Village District.

The projected impacts are based on the recent determination that approximately half (45 out of 92) of the numeric tree sites remaining valid from the original Heritage Tree Report are either City properties, or City rights of way. In addition, it is important to note that three of the numeric tree sites (#24, #78, and #81) actually contain multiple trees. When all of these additional trees are factored into the calculation, the total number of Heritage Trees that the City is responsible for maintaining equals 56.

There are a total of fifteen potential mandates for City-owned Heritage Trees listed within the Recommendations Summary of the report. Each of the fifteen recommendations is detailed below, along with the corresponding anticipated impact to the General Services' budgets and staff.

- 1. City Arborist to provide copies of this report to each City employee in charge of managing a Heritage Tree and to every property owner of a Heritage Tree located on private property. In some locations it is unclear if a tree is publicly or privately owned and who is responsible for its care. These tree locations should be clarified by the City Arborist.*

All tree locations have been clarified by City staff and the author of the Heritage Tree Report. The current ownership tally of Heritage Tree sites is: City - 45; Private - 44; North County Transit District - 2; State - 1; Federal -1. Providing a copy of the report to each of the City staff in charge of managing Heritage Trees, and a copy to each of the non-City owners of Heritage trees would entail color printing and mailing/distribution expenditures estimated at \$1800. These costs were not anticipated in the FY 07-08 budget process, but they could be absorbed within the Parks Maintenance (or other General Fund) budget, if necessary.

An alternative to this recommendation would be to post an electronic version of the report on the City's website, then send a letter to each of the non-City owners advising them that the document was available on line (or by disk/hard copy upon request). This action could reduce the above expenditure estimate by as much

as 50% - 75%. The staff impacts of either option would be limited and temporary, and therefore could be accommodated within the normal workload.

2. *Have all public Heritage Trees inspected at least annually by a qualified certified arborist who shall provide written recommendations for any required maintenance including pruning. The reports are to be kept in a permanent file for each tree for future reference along with a record of any work performed on the tree and the result of that work.*

Annually inspecting all City-owned Heritage Trees (56) by a qualified certified arborist, and obtaining written recommendations from that arborist for any necessary maintenance would entail professional services expenditures for a consulting arborist estimated at \$25,200 annually. Permanent records retention or document imaging costs could ultimately increase these expenditures by \$600 - \$1200 annually.

These costs were not anticipated in the FY 07-08 budget process. It is suggested that the costs therefore be accounted for in the FY 08-09 budget forward, with the drafting of the reports commencing in July 2008. Based on the ratio of the City-owned Heritage Trees (Street Trees – 36; Parks/Facilities Trees – 20), approximately 65% of these costs should be paid from the Street Tree Assessment District account, and 35% of these expenditures should be paid from the Parks Maintenance account. The staff impacts in administering this contract and coordinating the compilation/retention of the reports would be limited, and therefore could be accommodated within the normal workload.

3. *Remove any signs or wires that have been attached to any publicly-owned Heritage Tree, if this can be done without damaging the tree any further. Do not remove any signs of historic significance attached to the tree.*

City staff currently removes signs or wires that have been attached to any City-owned trees, as such postings are prohibited by City Ordinance No. NS-545 - Section 11.12.080.E.3. of the Carlsbad Municipal Code. This ordinance was adopted by the City Council in June 2000. Continuing to remove signs/wires from City-owned Heritage Trees should not have a significant fiscal or staffing impact.

4. *Adopt a City policy or regulation prohibiting the “topping” of any public tree.*

As referenced in the impact statement to Recommendation No. 3, the City Council previously adopted City Ordinance No. NS-545, which relates to the proper maintenance of public trees and shrubs. Sections 11.12.080.A. & D. of the Carlsbad Municipal Code address the unacceptable practice in arboriculture of “topping” trees. Continuing to adhere to and enforce - as applicable – the provisions of this Ordinance should not have a significant additional fiscal or staffing impact.

5. *Adopt a City policy or regulation that the appropriate pruning standards will be followed when pruning publicly-owned trees. The standards would include the “Best Management Practices – Tree Pruning” published by the International Society of Arboriculture and the “American National Standards for Tree Care Operations, ANSI A300 (Part 1)-2001 Pruning” and any safety standards that apply.*

Pursuant to City Ordinance NS-545 - Sections 11.12.130.A. & B. of the Carlsbad Municipal Code address the adoption of appropriate pruning standards for City-owned trees. These sections identify the Community Forest Management Plan as providing direction for the goals and policies related to the proactive management of trees on City property. The Tree Pruning Specifications of the International Society of Arboriculture are included within the Community Forest Management Plan. The City Council adopted this document in its entirety in April 2003. Chapter 7 of the Community Forest Management Plan, titled ‘Heritage Trees’, introduces the Heritage Tree Report, and indicates that the full report will be adopted and incorporated when completed. Continuing to adhere to and enforce - as applicable – the provisions of this Ordinance should not have a significant fiscal or staffing impact.

6. *Require that all pruning work on publicly-owned Heritage Trees would be performed by a certified arborist or by certified tree workers under the full-time supervision of a certified arborist. Certifications are to be current.*

Approximately half of the pruning work on City-owned trees is currently performed by a certified arborist or by certified tree workers under the full-time supervision of a certified arborist. Although requiring such pruning work to be performed on all publicly-owned Heritage Trees should not have a significant fiscal impact, it will necessitate temporary staffing shifts and/or scheduling adjustments to the regular workload.

7. *Pruning should be timed so as not to interfere with nesting birds.*

City staff currently schedules maintenance pruning of City-owned trees so that it does not interfere with nesting birds, when they are known to be present. The exception to this rule is for emergent pruning or removals. Continuing this process specifically in relation to City-owned Heritage Trees should not have a significant fiscal or staffing impact.

8. *Root damage to publicly-owned Heritage Trees should be minimized. Any proposed construction work under the canopy or within 100’ of the trunk of the tree to be reviewed by a qualified certified arborist during the planning stage of the work. The arborist shall specify a Tree Protection Zone and a Tree Protection and Preservation Plan that is site and tree specific. No activity or soil disturbance in the Tree Protection Zone will be permitted unless specifically approved in writing.*

Ensuring that any proposed construction work under the canopy or within 100' of the trunk of a City-owned Heritage Tree is reviewed by a qualified certified arborist during the planning stage of the work would entail professional services expenditures for a consulting arborist estimated at \$2,250 annually. Such expenditures would allow for the arborist's review/inspection, specification of a Tree Protection Zone, and development of a Tree Protection and Preservation Plan on up to 5 (of the 56) City-owned Heritage Trees each year.

These costs were not anticipated in the FY 07-08 budget process. It is suggested that the costs therefore be accounted for in the FY 08-09 budget forward, with the institution of this program commencing in July 2008. Based on the ratio of the City-owned Heritage Trees (Street Trees – 36; Parks/Facilities Trees – 20), approximately 65% of these costs should be paid from the Street Tree Assessment District account, and 35% of these expenditures should be paid from the Parks Maintenance account. The staff impacts in administering this contract and coordinating the compilation of the plans would be limited, and therefore could be accommodated within the normal workload.

9. *In the vicinity of publicly-owned Heritage Trees appropriate alternative means of underground construction, such as the use of tools like an "Air-Knife" or "Air-Spade", boring or tunneling, should be utilized to protect and prevent damage to the root system of the tree.*

The use of alternative means of underground construction, such as "Air-Knives", "Air-Spades", boring or tunneling, are often considered around City-owned trees. There are some projects or circumstances, however, where these methods of construction are not feasible. Where the methods are feasible, they are also generally more expensive and time consuming than traditional means of underground construction, such as trenching or excavation.

It is difficult to quantify the precise amount of additional expense or staff/contractual time needed for these methods without being able to refer to a specific project scope. Estimations are that such work can typically be twice as costly and labor intensive. Although unanticipated, up to \$2000 of these types of costs could be absorbed within the respective Street Tree and Parks Maintenance FY 07-08 budgets for publicly-owned Heritage Trees. Any additional project costs would need to be budgeted for on an individual basis.

10. *Hardscape conflicts should be remedied without damaging the root system of a publicly-owned Heritage Tree. Some methods that may be utilized include: the use of flexible paving such as sand laid unit pavers like brick or rubber sidewalk sections; grinding raised pavement sections; ramping or bridging over roots with pliable paving or wooden walkways; removing pavement and replacing it with decomposed granite or mulch; rerouting the hardscape to accommodate the current and future trunk expansion and root growth, even if it means the loss of a parking spot or two. This would also provide additional exposed soil surface that would be beneficial to the tree's health.*

Much of the impact statement provided to Recommendation No. 9 also applies to Recommendation No. 10. The use of alternative hardscape is often considered around City-owned trees. There are some projects or circumstances, however, where these methods of construction are not feasible. Where they are feasible, and depending upon the type of alternative utilized, they may be more expensive and/or more time consuming than traditional means of hardscape, such as concrete or asphalt.

It is difficult to quantify the precise amount of additional expense or staff/contractual time needed (if any) without being able to refer to a specific project scope. Estimations are that some of alternative work, such as sand laid unit pavers, can be more costly and labor intensive; while other alternative work, such as decomposed granite or mulch, can be less costly and labor intensive. Although unanticipated, up to \$2000 of these types of costs could be absorbed within the respective Street Tree Assessment District and Parks Maintenance FY 07-08 budgets. Any additional project costs would need to be budgeted on an individual basis.

11. *Turf, at least under the drip line of the tree, should be covered with a 3"-4" deep layer of organic mulch such as ground or chipped tree prunings. The mulch should be kept at least 1' away from the trunk of the tree. The mulch should be inspected at least twice a year and additional mulch added when it has been reduced to a depth of 1" or less through decomposition. The mulch cover will shade and kill the grass. For small trees, or trees with a narrow upright growth habit, install the mulch to at least a 5' distance from the trunk.*

Killing existing grass and installing mulch under the drip line of City-owned Heritage Trees would only be feasible in certain locations, predominantly City park sites. The drip line is essentially a ring around the tree, with the radius being equal to the furthest extending branch. The installation of this type of mulch pattern would not be practical to most City street trees, due to existing hardscapes (sidewalks, driveways, and streets), appurtenances (curbs, gutters, and storm drains), and adjacent private properties (front or side yards, and buildings or structures). As previously noted, 36 of the 56 City-owned Heritage Trees are City street trees.

The remaining 20 City-owned Heritage Trees are located on either City park or facility sites. In several of these cases, the installation of this type of mulch pattern would not be practical due to some of the issues listed above, and tot lot or picnic area encroachment. The mulch pattern could, however, be installed around these trees to the greatest degree possible. It is estimated that the cost of the required mulch would be \$1000 or less annually. This expenditure could be absorbed within the Parks Maintenance Budget. The time involved in procuring and distributing the mulch could also be added to the standard mode of operations without a significant staffing impact.

12. *Compaction under the canopies of trees can be partially corrected by several methods. The least damaging and costly method is to install organic mulch as specified above for turf removal over the compacted area or where surface roots are exposed.*

As described in the impact statement to Recommendation No. 11, removing turf and installing mulch within the drip lines of City-owned Heritage Trees would be feasible on a limited scale only.

13. *Require a report from a qualified certified arborist for any public Heritage Tree recommended for removal because it represents a “hazardous” condition. The arborist shall use a national standard, the ‘ISA – Hazard Evaluation Form’, as a method to determine the hazard rating of a tree. The City Arborist has the discretionary right to approve, request a second opinion in writing, or recommend actions that may reduce the condition to a less than significant level of hazard. If this type of hazard reduction cannot be done and it is the City’s Arborist’s recommendation to remove the tree it will remain the City Council’s option to approve or deny the removal or require additional measures.*

Pursuant to City Ordinance NS-545 - Sections 11.12.090.C., E. & F., and 11.12.140. of the Carlsbad Municipal Code address the protection of City-owned Heritage Trees, and stipulate the process that must be followed for any potential removal of these trees. These sections thoroughly ensure the desired preservation of such trees, without the need to develop additional arboricultural reports. Presuming that the removal of a City-owned Heritage Tree will be a rare occurrence, it is expected that the related costs could be absorbed within the respective Street Tree Assessment District or Parks Maintenance budgets. The staff time needed for such removals could also be included in the workload without significant impact.

14. *For any publicly-owned Heritage Tree that is removed a suitable replacement tree shall be replanted.*

Pursuant to City Ordinance NS-545 - Sections 11.12.100.A., B. & D. of the Carlsbad Municipal Code address the replacement of City street trees with suitable species and sizes. City-owned Heritage Trees that are also City street trees are already subject to these provisions. The same provisions could also be applied to City-owned Heritage Trees that are on City parks/facilities sites. Again presuming that the replacement of a City-owned Heritage Tree will be a rare occurrence, it is expected that the related costs could be absorbed within the respective Street Tree Assessment District or Parks Maintenance budgets. The staff time needed for any replacements could also be included in the workload without significant impact.

15. *A Technical Manual for Trees modeled on the City of Palo Alto’s should be developed for the City of Carlsbad. Such a manual would not only benefit the City’s Heritage Trees, but all of the City’s publicly-owned trees.*

As noted in the impact statement to Recommendation No. 5, the City Council adopted The Community Forest Management Plan in June 2003. This plan provides the direction for the goals and policies related to the proactive management of trees on City property. The Heritage Tree Report is to be adopted by the City Council and incorporated into this Community Forest Management Plan. The plan is a comprehensive document, which does not appear to be in need of supplemental technical manuals. Based on that determination, there would be no additional fiscal or staffing impacts.

On a final note, similar fiscal and staffing impacts should be anticipated on the General Services Division when the 'Heritage Tree Report – Phase II' is completed and forwarded for review/adoption. Should you have any questions or comments regarding the impact statements herein, please contact me at extension 2941.



**KYLE LANCASTER**

C:     Public Works Director  
         Public Works Manager Clavier  
         Deputy Library Director Smithson  
         Public Works Supervisor Bliss  
         Public Works Supervisor Meadows